HOW SHADOW FILES ARE CREATED

Shadow files are summarized versions of the master files. The shadow files are summarized because not all of the data fields are required for online inquiry or updating. The shadow files are listed below:

Allotment [1/]
Appropriation [1/]
Cash Control [1/]
Document
Grant Project [1/]
History
Vendor Payment

[1/] Shadow files that allow trial posting of online edited transactions.

The Allotment, Appropriation, Cash Control and Grant Project Shadow files all provide important fund status information that may be accessed online throughout the day. These files may also be used in the online editing process of input transactions, which will be described later in this chapter.

The Document, History and Vendor Payment Shadow files provide additional information on the status of individual documents and vendor payments. These files are not used for online editing and updating. Since all three files are relatively large, complete editing against them would place a burden on computer resources. However, they are available for online inquiry throughout the day, as are the other four shadow files. The Document File also may be looked-up (**F4**-Document Retrieval) during financial transaction entry to find a matching record and populate a transaction with that data.

As described in the next section, the shadow files may be updated with accounting transactions that are entered throughout the day. However, any transaction that posts to the shadow files during the day and later fails a nightly system update process edit, does not post to the master files. The errored transaction is erased from the shadow files by the nightly system update process. This process replaces all shadow file data with refreshed master file data.

SHADOW FILE EDITING AND POSTING

One major function of the shadow files is to provide agencies the option of editing accounting transactions during online entry. Since it may not be desirable to fully edit all transactions online, three editing options are available. These online batch editing options are:

0 - No edits except for data integrity;

1 - Data integrity, table edits; document file match edits and

2 - Data integrity, table edits, document file match edits, fund control edits and shadow file posting.

The desired editing option is entered in the batch Edit Indicator field of the Batch Header Slip form. For more information, see Volume 1, Chapter VIII - Preparing Transaction Entry Documents, *Batch Header Slip Preparation*. The specific option selected may vary by batch. However, like all other batch identification data, once the edit indicator is entered for a specific batch it cannot be changed after the **Enter** key is successfully pressed. This edit applies to all transactions within a batch.

When the **Enter** key is pressed (for transaction entry), regardless of which batch Edit Indicator is selected, CALSTARS performs various ***data integrity*** edits. These include:

- ✪ Transaction Code Decision (TD) Table edits to determine which fields are **Not Allowed, Required,** or **Optional**/**Agency Defined** (Opt/Agy Defined);
- ✪ Data format edits to determine if fields such as Index and PCA are completed with alpha, numeric, or alphanumeric, as appropriate; and
- ✪ Relational edits to determine if the transactions are properly grouped, i.e., manual check transactions cannot be included in the same batch as automated check transactions.

The processing performed under each of the editing options is described in the following paragraphs.

Online Batch Editing Option '0' (No Edit)

Batch Edit Indicator **0** (zero) performs no edits of transactions against agency tables or shadow files. Only the Transaction Code, funding Fiscal Year and Amount fields are edited. When this option is selected, 'NO EDIT' is displayed as the MODE on the Transaction Entry screen. Use this option if tables and files are not available.

Online Batch Editing Option '1' (Edit Only)

Batch Edit Indicator **1** edits transactions against agency tables and the document file for matching records, but not any other shadow files. When this option is selected, 'EDIT ONLY' is displayed as the MODE on the Transaction Entry screen. In the ‘Edit Only’ mode, the system compares the information keyed on the transaction with the codes contained in the agency's tables. In addition, if the transaction is updating a document, the system will compare the information keyed on the transaction to the information contained in the document file. If all entered codes are valid, a message confirming that the transaction was successfully written is displayed on the screen, and the transaction is saved on the transaction file.

If one or more of the entered codes are invalid, the system accesses the agency's Organization Control (OC) Table to determine the severity of the error and what processing should be performed. The indicators specified in the Data Related Error Severity Segment of the OC Table dictate whether the transaction is accepted or rejected. The values for these indicators are **F** or blank-**Fatal**, **W**-**Warning**, or **I-Ignore**. Volume 2, Chapter IV-0C, Organization Control Table Maintenance identifies the valid values for each error condition. These indicator values determine the online processing performed on transactions in an option **1** batch. Each value and the specific processes performed are described in the following paragraphs.

If the OC Table Error Severity indicator is **blank** or **F**, the appropriate error message is displayed on the screen. The transaction must be corrected or "forced" (by pressing the **F10** key). Forced transactions will post to the Error File unless corrective action is taken.

If the OC Table Error Severity indicator is a **W**, the transaction posts to CALSTARS because the online system ignores the data-related error. However, after the next nightly batch process runs, the system displays a warning error message (**W** or **K** error code) on the Error File.

If the OC Table Error Severity indicator is an **I**, the transaction is valid because the system ignores any data-related error that may exist.

Online Batch Editing Option '2' (Edit and Trial Post)

Batch Edit Indicator **2** edits transactions against the agency tables, document file records and shadow files and trial posts to the shadow files. When this option is selected, 'EDIT & TRIAL POST' is displayed as the MODE on the Transaction Entry screen. Transactions entered in option **2** batches are first edited for data integrity, as described above (option **0**). When these edits are passed, the system then performs the same table edits as in option **1** described above. After all of the table edits are passed (including transactions which received table edit warning messages only), the transaction must also pass fund control edits.

To perform fund control edits, the system compares the transaction being entered to the available balances contained in the agency's Appropriation, Allotment, Cash Control and Grant Project Shadow files. If the transaction amount exceeds the amount of available funds in one or more of these files, the transaction will fail the fund control edit.

When the system detects a fund control error, it accesses the agency's OC, AS and PC tables to determine the severity of the error and the processing to be performed. There are several indicators in the OC, AS and PC tables that dictate the type of fund controls performed on appropriations, cash balances and project budgets. In the AS and PC tables, control may be specified as either **No Fund Control**, **Absolute Fund Control**, or **Advisory Fund Control**. The fund control edits and the specific online processing performed are described below.

NOTE: To maximize the usefulness of batch Edit Indicator **2**, all staff entering batches should use Edit Indicator **2**. For example, Employee #1 enters a payment transaction against a contract using Edit Indicator **1**. Later the same day, Employee #2 enters a transaction using Edit Indicator **2**. Employee #2 may not be aware the contract is overspent because the first payment entered did not post to the shadow file.

No Fund Control

If the AS or PC Table Appropriation Control Type Indicator is set to **0**-No Fund Control, a message confirming that the transaction was successfully written is

A final cause of discrepancy between nightly system processing and online editing may result from subsystem processing. For example, an expenditure transaction may pass the online fund control edits during the day, but fail during the nightly system update process because transactions generated by cost allocation reduced the available appropriation balance.

Transaction Editing "Override" Effects on Shadow File Posting

Occasionally, it may be beneficial to have a transaction in an option **1** or **2** batch accepted even if it fails an online table or fund control edit. For example, table maintenance activity is entered to add the new vendor and later that same day the new vendor is used for input transaction entry. Since tables are not updated online, the transaction would not pass online table edits without manually overriding the edits.

To override the online edits, the **F10** key is pressed after attempting to use the **Enter** key. When the override capability is used, a message confirming that the "forced" transaction was successfully written is displayed on the screen. The transaction will then be posted by the nightly system update process after the table maintenance entry is posted. A forced transaction is saved on the transaction file for transmittal to the nightly system update process, but will not post to the shadow files during the day. The transaction will be included in the refreshed shadow files after the nightly system update process if it passes all edits and posts to the master files.

Batch Correction Effects on Table Edits and Shadow File Posting

When a previously entered transaction is recalled for correction or change, the same online edits that were performed on the transactions during original data entry are used on the corrected or changed transaction:

- ✪ If the original editing option specified was **1**, a corrected transaction must pass all of the online table edits before it will replace the previously entered transaction.
- ✪ If the original editing option specified was **2**, a corrected transaction must pass all of the online table and fund control edits before it will replace the previously entered transaction.

If a transaction fails an edit, the appropriate error message will be displayed and the transaction, as originally saved, will remain in the shadow file. When a corrected transaction using edit option **2** passes all of the edits, the old transaction is automatically reversed from the shadow file balances and the new transaction is posted.

Corrected transactions may by "forced" with the **F10** key. As explained in the previous section, forced transactions do not post to the shadow files.